



Docket No: 031896-036000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)
Christopher John CORCORAN et al.)
Application No. 10/628,432) Art Unit: 1651
Filed: July 29, 2003) Confirmation No. 5325
For: MODIFIED ADAMTS4 MOLECULES AND)
METHOD OF USE THEREOF) Date: March 16, 2004

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

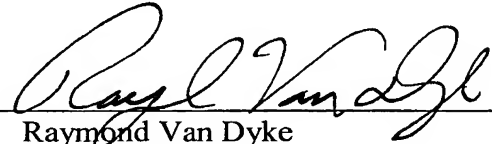
In accordance with the duty of disclosure as set forth in 37 C.F.R. §1.56, Applicants hereby submit the following information in conformance with 37 C.F.R. §§ 1.97 and 1.98. In accordance with the PTO notice dated July 11, 2003, waiving the requirement under 37 CFR 1.98 (a)(2)(i) for submitting copies of each cited U.S. Patent, for all U.S. national patent applications filed after June 30, 2003, no copies of U.S. Patents are enclosed. However, copies of foreign patents and non-patent literature are submitted under 37 CFR 1.98(a)(2).

The documents are being submitted within three (3) months of the filing of this application or entry into the national stage of this application, or before the first Office Action on the merits, whichever is later, therefore no fee or certification is required under 37 C.F.R. § 1.97(b).

It is requested that the accompanying PTO-1449 be considered and made of record in the above-identified application. To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested

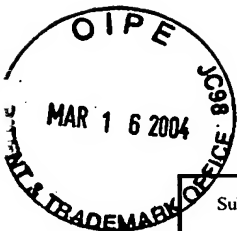
that an Examiner initialed copy of this form be returned to the undersigned.

Respectfully submitted,

By: 
Raymond Van Dyke
Registration No. 34,746

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	
				Filing Date	
				First Named Inventor	
				Art Unit	
Confirmation No.		Attorney Docket Number			
Sheet	1	of	3	10/628,432	
				July 29, 2003	
				Christopher John CORCORAN et al.	
				1651	
				5325	
				031896-036000	

U.S. PATENT DOCUMENTS					
Examiner Initials [*]	Cite No. ¹	U.S. Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
		US-4,522,811	06/11/1985	Eppstein et al.	
		US-4,554,101	11/19/1985	Hopp	

FOREIGN PATENT DOCUMENTS						
Examiner Initials [*]	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁴
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
		EP 0 123 289	10/31/1984	Brake		Full
		WO 86/00639	01/30/1986	Clark et al.		Full

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials [*]	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Cal et al., "Cloning, expression analysis, and structural characterization of seven novel human ADAMTSs, a family of metalloproteinases with disintegrin and thrombospondin-1 domains", Gene 283 (2002), pp. 49-62.	
		Somerville et al., "Characterization of ADAMTS-9 and ADAMTS-20 as a Distinct ADAMTS Subfamily Related to <i>Caenorhabditis elegans</i> GON-1*", J. Biol. Chem. March 14, 2003, Vol. 278, No. 11, pp. 9503-9513.	
		Kuno et al., "ADAMTS-1 Protein Anchors at the Extracellular Matrix through the Thrombospondin Type I Motifs and Its Spacing Region*", J. Biol. Chem., Vol. 273, No. 22, May 29, 1998, pp. 13912-13917.	
		Tortorella et al., "Sites of Aggrecan Cleavage by Recombinant Human Aggrecanase-1 (ADAMTS-4)*", J. Biol. Chem., Vol. 275, No. 24, June 16, 2000, pp. 18566-18573.	
		Tortorella et al., "Purification and Cloning of Aggrecanase-1: A Member of the ADAMTS Family of Proteins", SCIENCE, Vol. 284, June 4, 1999, pp. 1664-1666.	
		Abbaszade et al., "Cloning and Characterization of ADAMTS11, an Aggrecanase from the ADAMTS Family*", J. Biol. Chem., Vol. 274, No. 3, August 13, 1999, pp. 23443-23450.	
		Matthews et al., "Brain-enriched Hyaluronan Binding (BEHAB)/Brevican Cleavage in a Glioma Cell Line Is Mediated by a Disintegrin and Metalloproteinase with Thrombospondin Motifs (ADAMTS) Family Member*", J. Biol. Chem., Vol. 275, No. 30, July 28, 2000, pp. 22695-22703.	

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				<i>Complete if Known</i>	
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		Delagrave et al., "Recursive ensemble mutagenesis", Protein Engineering, Vol. 6, No. 3, 1993, pp. 327-331.		
		Hughes et al., "Monoclonal antibodies that specifically recognize neoepitope sequences generated by 'aggrecanase' and matrix metalloproteinase cleavage of aggrecan: application to catabolism <i>in situ</i> and <i>in vitro</i> ", Biochem J., 1995, pp. 799-804.		
		Mercuri et al., "Recombinant Human Aggrecan G1-G2 Exhibits Native Binding Properties and Substrate Specificity for Matrix Metalloproteinases and Aggrecanase*", J. Biol. Chem., Vol. 274, No. 45, November 5, 1999, pp. 32387-32395.		
		Miller et al., "An Insect Baculovirus Host-Vector System For High-Level Expression of Foreign Genes", Genetic Engineering, Vol. 8, (Plenum Press 1986), pp. 277-287.		
		Caterson et al., "Mechanisms involved in cartilage proteoglycan catabolism", Matrix Biology, Vol. 19, (2000), pp. 333-344.		
		Kashiwagi et al., "TIMP-3 Is a Potent Inhibitor of Aggrecanase 1 (ADAM-TS4) and Aggrecanase 2 (ADAM-TS5)*, J. Biol. Chem., Vol. 276, No. 16, April 20, 2001, pp. 12501-12504.		
		Hashimoto et al., "Inhibition of ADAMTS4 (aggrecanase-1) by tissue inhibitors of metalloproteinases (TIMP-1, 2, 3 and 4), FEBS Letters 494, (2001) pp. 192-195.		
		Little et al., "Cyclosporin A Inhibition of Aggrecanase-Mediated Proteoglycan Catabolism in Articular Cartilage", ARTHRITIS & RHEUMATISM, Vol. 46, No. 1, January 2002, pp. 124-129.		
		Rodríguez-Manzanique et al., "ADAMTS1 cleaves aggrecan at multiple sites and is differentially inhibited by metalloproteinase inhibitors", Biochemical and Biophysical Research Communications 293 (2002), pp. 501-508.		
		Peppard et al., "Development of a High-Throughput Screening Assay for Inhibitors of Aggrecan Cleavage Using Luminescent Oxygen Channeling (AlphaScreen™), Society for Biomolecular Screening, (2003) pp. 149-156.		
		Gossen et al., "Tight control of gene expression in mammalian cells by tetracycline-responsive promoters", Proc. Natl. Acad. Sci. USA, Vol. 89, June 1992, pp. 5547-5551.		

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		Urlaub et al., "Isolation of Chinese hamster cell mutants deficient in dihydrofolate reductase activity", Proc. Ntl. Acad. Sci. USA, Vol. 77, No. 7, July 1980, pp. 4216-4220.		
		Gill et al., "Calculation of Protein Extinction Coefficients from Amino Acid Sequence Data", Analytical Biochemistry 182, (1989) pp. 319-326.		
		Flannery et al., "Autocatalytic Cleavage of ADAMTS-4 (Aggrecanase-1) Reveals Multiple Blycosaminoglycan-binding Sites*", J. Biol. Chem., Vol. 277, No. 45, November 8, 2002, pp. 42775-42780.		
		Okayama et al., "High-Efficiency Cloning of Full-Length cDNA", Molecular and Cellular Biology, Vol. 2, No. 2, February 1982, pp. 161-170.		
		Gough et al., "Structure and expression of the mRNA for murine granulocyte-macrophage colony stimulating factor", EMBO Journal, Vol. 4, No. 3, 1985, pp. 645-653.		
		Wong et al., "Human GM-CSF: Molecular Cloning of the Complementary DNA and Purification of the Natural and Recombinant Proteins", SCIENCE, Vol. 228, May 17, 1985, pp. 810-815.		
		Kaufman, "Identification of the components necessary for adenovirus translational control and their utilization in cDNA expression vectors", Proc. Nat. Acad. Sci. USA, Vol. 82, February 1985, pp. 689-693.		
		Morinaga et al., "Improvement of Oligonucleotide-Directed Site-Specific Mutagenesis Using Double-Stranded Plasmid DNA", BIO/TECHNOLOGY, July 1984, pp. 636-639.		
		Jang et al., "Initiation of Protein Synthesis by Internal Entry of Ribosomes into the 5' Nontranslated Region of Encephalomyocarditis Virus RNA In Vivo", J. Virology, Vol. 63, No. 4, April 1989, pp. 1651-1660.		
		Taniguchi et al., "Expression of the human fibroblast interferon gene in <i>Escherichia coli</i> ", Proc. Natl. Acad. Sci. USA, Vol. 77, No. 9, September 1980, pp. 5230-5233		
		Kaufman et al., "Amplification and Expression of Sequences Cotransfected with a Modular Dihydrofolate Reductase Complementary DNA Gene", J. Mol. Biol. (1982) 159, pp. 601-621.		
		Kaufman et al., "Construction of a Modular Dihydrofolate Reductase cDNA Gene: Analysis of Signals Utilized for Efficient Expression", Molecular and Cellular Biology, Vol. 2, No. 11, November 1982, pp. 1304-1319.		
		Littlefield et al., "Selection of Hybrids from Matings of Fibroblasts in vitro and Their Presumed Recombinants", August 14, 1964, Vol. 145, pp. 709.		

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